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ILLINOIS STATE BOARD OF HEALTH.

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PREVENTION AND SUPPRESSION

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EPIDEMIC AND MALIGNANT DISEASES.

TYPHOID FEVER.

[S. B. H. No. 258-20m-2, 1, '92.]

ILLINOIS STATE BOARD OF HEALTH.

OFFICIAL ORDER:

Concerning the Prevention and Suppression of Typhoid Fever.

Revised and in force February 1, 1892.

OFFICE OF THE SECRETARY,
SPRINGFIELD, ILL., February 1, 1892.

To Health Authorities, Attending Physicians and Heads of Households :

At the XVth Annual Meeting of the ILLINOIS STATE BOARD OF HEALTH, held in the City of Springfield, January 28, 1892—the increasing prevalence of Typhoid Fever being under discussion—it was

Ordered, That the Secretary be authorized to procure a sufficient number of copies of the Rules and Regulations of the BOARD for the Prevention and Suppression of Typhoid Fever and to distribute the same as the sanitary necessities of the State may require.

In accordance with this order the appended *Rules and Regulations*—originally promulgated in February, 1883—are again published with the knowledge that *wherever they have been thoroughly carried out Typhoid Fever has either been prevented where it threatened or readily controlled and suppressed where it had already appeared.*

This order is issued in conformity with the statute which vests the STATE BOARD with authority in all matters pertaining to quarantine, and with the duty of making all necessary rules and regulations for the preservation or improvement of the public health; and such rules and regulations have, therefore, the weight and authority of law. By the same statute their enforcement is made binding upon all health authorities in the State. Such authorities embrace—

1. Regularly constituted *Boards of Health* of incorporated cities, towns and villages.
2. *Supervisors, assessors and town clerks* of townships.
3. *County commissioners* of counties in which there are no township organizations.

The officers designated in the second and third classes constitute *ex officio* the Boards of Health for their respective territories in the absence of any other provision therefor.

The *Rules and Regulations* which follow are believed to cover every important detail and are part and parcel of this ORDER, to be strictly enforced in appropriate cases. A copy should be left in every house where there is a case of Typhoid Fever and their republication in the local papers wherever the disease appears is recommended.

BY ORDER OF THE BOARD :

F. W. REILLY, M. D.,
Secretary.

TYPHOID FEVER:

ITS SANITARY FEATURES—RULES AND REGULATIONS FOR ITS PREVENTION AND SUPPRESSION.

ITS SANITARY FEATURES.

1. For sanitary purposes Typhoid Fever is a contagious disease. Its specific poison will produce the same disease if introduced into the system of a susceptible healthy individual.

2. Like small-pox, scarlet fever and many other contagious diseases, one attack of Typhoid Fever, as a rule, protects from subsequent attacks.

3. The specific poison of Typhoid Fever is contained in the diarrheal discharges (and possibly, in other excretions and the exhalations) of the patient. If these obtain access to a water-supply or to articles of food or drink an outbreak of Typhoid will follow among those partaking of such water or food. Repeated instances of this kind have been traced to the use of water from an infected well and to infected milk.

4. The diarrheal discharges when dry may preserve the poison as effectually as the crusts of small-pox, the scales of scarlet fever, and the dried membrane of diphtheria preserve the specific poisons of those diseases.

5. These discharges coming into contact with putrid animal matter, as by being thrown into water-closets and privies, are capable of saturating such matter with the Typhoid-Fever poison in its most concentrated and virulent form.

6. Typhoid Fever may, therefore be propagated in either of the following ways:

(a) By poisoning the water-supply through direct access of the discharges, or by their percolation through the soil.

(b) By the aerial dissemination of the poison in dried particles of discharges or other excretions.

(c) By exhalations from sewers, water-closets, privies or other receptacles of these discharges.

By modes (a) and (b) articles of diet, both liquid and solid, may be contaminated and thus give rise to outbreaks of the disease.

7. From the foregoing the deduction is obvious that the important sanitary indication during the existence of a case of Typhoid Fever, is to subject the intestinal discharges and other excretions of the patient to such process of disinfection as will destroy the specific poison contained and to do this promptly and efficiently.

In this work boards of health can do little unaided by the Family Physician. Upon him rests the responsibility of seeing that thorough disinfection is carried out in every case of Typhoid Fever he may be called upon to treat.

RULES AND REGULATIONS.

1. When a case of Typhoid Fever is known to exist in a neighborhood it must be at once reported to the proper health authority, which should institute a thorough investigation as to the origin of the case. A strict examination should be made regarding the surroundings and character of the water-supply of the locality. If there be any reason to suspect that this may be possibly contaminated from the case its use should be forbidden until the proper measures can be taken to protect it against such contamination and the question of its safety be definitely settled. The location of wells, with reference to the privy into which Typhoid discharges are thrown, the inclination of the ground between such points, and the character of the soil, should all be taken into consideration. Wells into which surface-washings from the infected premises might find their way by the natural slope of the ground, and wells within a given distance of the privy of such premises, should be at once abandoned. The contaminating distance varies according to the nature of the soil and the depth of the well; in a loose, porous soil a well 30 to 40 feet deep will be dangerous if within 100 feet of Typhoid premises.

2. If the case exists in a sewered neighborhood every householder whose premises connect with a sewer in common with the infected house should have a thorough inspection made of the drainage of his own premises. If the sewer connection be not broken by a proper ventilating shaft, extending above the highest point of the roof, such shaft should be provided forthwith. All interior plumbing should be examined, defective joints repaired, traps put in order and the flushing devices of water-closets made effective.

3. Scrupulous cleanliness in every portion of the premises should be enforced. All decaying animal and vegetable matter and every kind and source of filth in and around the house should be removed and disinfectants be freely used. Surface drains and gutters, areas, outhouses, privies, shelters for domestic animals, fowls, etc., should receive close and constant attention and *Disinfecting Solution No. 3* (see page 7) should be used freely and regularly in every such place.

4. The precautions recommended to prevent the extension of the infection to other localities are of even more importance upon the premises where a case of Typhoid Fever exists. Here there is the greatest danger of the poison finding lodgment in the soil which favors its growth and intensity—namely, filth in any form. Therefore, the advice given in Rule 3 should be rigidly carried out in its every detail upon the infected premises.

5. Within the infected house itself the important matter to attend to is the prompt disinfection of the discharges from the patient and of everything liable to come in contact with such discharges. The following details should be observed:

(a) All discharges should be received in vessels and treated with *Disinfecting Solution No. 3* or *No. 4* (see page 7).

(b) If there be a water-closet this should be used exclusively for the discharges from the patient while the fever lasts, and the receptacle should be flooded three or four times a day with *Disinfecting Solution No. 3*.

(c) When practicable—instead of being thrown into a privy—the discharges, after being thoroughly disinfected, should be buried in the ground, at least 100 feet away from any well or other source of water-supply.

(d) A pail or tub of *Disinfecting Solution No. 3* should be kept in the sick-room, and into this all clothing, blankets, sheets, towels, etc, used about the

patient or in the room should be dropped immediately after used and before being removed from the room. They should then be well boiled as soon as practicable. Rags, closet-paper or other material used about the person of the patient should be immediately burned.

(e) The sick-room should be large, easily ventilated and as far from the living and sleeping-rooms of other members of the family as it is practicable to have it. All ornaments, carpets, drapery and articles not absolutely needed in the room should be removed. A free circulation of air from without should be admitted both by night and by day—there is no better disinfectant than pure air. Place the bed as nearly as possible in the middle of the room, but keep the patient out of draughts.

(f) Not more than two persons, one of them a skillful, professional nurse, if obtainable, should be employed in the sick-room and their intercourse with other members of the family should be properly restricted. If possible, the attendants should be selected from those who have already had Typhoid Fever. In the event that it becomes necessary for an attendant to go away from the house, a change of clothing should be made, using such as has not been exposed to infection; the hands, face and hair should be thoroughly washed with a disinfectant soap and water—a variety of such soaps are sold by druggists.

6. After recovery and during convalescence the patient is to be considered dangerous so long as the intestinal discharges continue to be more copious, liquid and frequent than natural; and disinfection should be maintained until the attending physician advises that it is no longer necessary.

7. In the event of death, the body should be wrapped in a sheet thoroughly soaked in *Disinfecting Solution No. 2*, and placed in an air-tight coffin, *which is to remain in the sick-room until removed for burial*. Public funerals and wakes over such a body are forbidden.

8. After recovery or death all articles worn by, or that have come in contact with the patient, together with the room and all its contents should be thoroughly disinfected by burning sulphur in the following manner:

(a) Paste strips or sheets of paper over the keyholes, window cracks, door cracks, fireplaces, stove holes and other openings. Have all windows and doors shut.

(b) All the articles in the room that cannot be washed must be spread out on chairs or racks. Mattresses should be opened and set up on edge. Window shades and curtains spread out full length. If there is a trunk or chest in the room open it, but let nothing stay in it. Open the pillows so that the sulphur fumes can reach the feathers.

(c) Use 3 pounds of sulphur for every 1,000 cubic feet in the room. A room 10 feet long, 10 feet wide and 10 feet high has 1,000 cubic feet. For a closet half as large use a pound and a half of sulphur. Moisten the sulphur with alcohol.

(d) Take out of the room any wire mattress, sewing machine, piano or other machine; sulphur fumes injure fine iron or steel.

(e) Burn the sulphur in an iron vessel with live coals. Take a tub with about two inches of water in the bottom; put some bricks in it; then put the vessel with live coals on the bricks, moisten the sulphur with alcohol and throw it on the coals. When the sulphur begins to burn close the room tightly for 24 hours. A sulphur candle is sold by druggists and is safer and more convenient than loose sulphur and alcohol.

(*f*) At the end of 24 hours open the windows, top and bottom, and air the room for a day or two.

(*g*) Take out the clothes and other things that have been fumigated and put them in the sunshine and air for several days. Take up the carpet, have it beaten and air it for about a week.

(*h*) While the room is being aired, brush the walls and ceiling and then scrub the paint, all wood-work and floors with lye soap and hot water.

(*i*) It is safer to burn straw, husk, moss or "excelsior" mattress filling.

The outer clothing worn by those who have nursed the sick should be fumigated with sulphur. All clothing that can be washed should be boiled for at least one hour.

DUTIES OF ATTENDING PHYSICIAN AND HEALTH AUTHORITY.

Cases of Typhoid Fever should be promptly reported to the proper health authority by the attending physician or by the head of the family. Immediately upon receipt of notice of the existence of a case, the health officer should visit the locality and secure prompt compliance with the precautions above set forth. He should make a careful investigation as to the probable cause of the outbreak and if this be found to be due to an infected water or milk supply the use of such supply should be rigidly interdicted and the necessary steps at once taken to correct the evil.

He should superintend the disinfection of rooms, clothing and premises and, finally, give official certificates of recovery and of freedom from liability to communicate the disease to others. Until these latter are issued a system of isolation or quarantine should be maintained with regard to an infected house and its contents—persons and things.

In the event of death from a malignant case, or where there are a number of severe cases in one house or locality, the health officer should exercise even greater authority than here indicated. He should enforce disinfection, cleansing of premises, abandonment of suspected water and other measures, arbitrarily, if necessary and should enforce the prohibition of public funerals and wakes.

Where there is no health officer the attending physician should see that the proper precautions are carried out.

Painless diarrhea, or simple "looseness of the bowels," occurring in one who has never had Typhoid Fever should excite suspicion while this disease exists in a neighborhood. The disease varies in the intensity of its symptoms, so that mild, walking cases are not uncommon. It is advisable, therefore, that *all* diarrheal discharges should be disinfected during the existence of Typhoid Fever in a community.

DISINFECTANTS.

For general use: Sunlight, fresh air, soap and water, thorough cleanliness, are the best disinfectants.

For special purposes, the following solutions are good, simple and cheap.

DISINFECTING SOLUTION NO. 1.

Dissolve four ounces (a quarter of a pound) of the best fresh chloride of lime in one gallon of pure water, or half a pound to two gallons.

Pour one quart of this into the vessel with each discharge of the patient and leave it in the vessel for an hour before throwing it into the privy-vault or water-closet. Let the patient spit into a cup half-full of this solution.

This solution will bleach colored cloth. If Solution No. 1 is offensive, use Solution No. 2 or No. 3.

DISINFECTING SOLUTION NO 2.

Dissolve corrosive sublimate, permanganate of potash and muriate of ammonia in pure water in the proportions of half an ounce of each to two gallons of water.

Use for the same purpose and in the same way as Solution No. 1, but it does not act so quickly; let the discharge and solution stand a couple of hours before throwing into the vault or water closet. This solution is poisonous and will injure lead pipes. It should not be made or kept in a metal vessel.

DISINFECTING SOLUTION NO. 3.

Dissolve four ounces of corrosive sublimate and one pound of sulphate of copper in one gallon of water.

Use this for disinfecting clothing and bed clothes. Add a teacupful of it to two gallons of water. Soak the clothes in it for two hours, then wring them out and boil them. This solution is poisonous, and must not be kept in metal vessels, nor poured into lead pipes.

To disinfect privy vaults and cess-pools use one gallon of Solution No. 3 to three gallons of water. Pour this over the contents of the vault and into the cess-pool. All parts of the vault and the wood work should be thoroughly wet with the solution. This should be done every day while the disease is in the house.

Solution No. 2 or No. 3 may be made by the barrel and kept in a safe place where children and animals cannot get at it.
